

REMARKS

Applicants thank the Examiner for considering the references cited with the Information Disclosure Statement filed January 23, 2002.

Applicants request that the Examiner acknowledge the claim for priority under 35 U.S.C. § 119, and receipt of a certified copy of the priority document submitted March 14, 2002.

Applicants also request that the Examiner either accept or reject the drawings filed January 23, 2002.

Status of the Application

Claims 1-13 are all the claims pending in the Application, as claims 4-13 are hereby added to more fully define the invention. Claims 1-3 have been rejected.

Anticipation Rejection

The Examiner has rejected claims 1-3 under 35 U.S.C. § 102(b) as being anticipated by what the Examiner has labeled "Admitted Prior Art." This portion is actually described as "conventional," and therefore should more accurately be indicated as being "Admitted Conventional Art," (hereinafter "ACA"). This rejection is respectfully traversed.

The ACA discloses (see FIGS. 7-9) a receiving subconnector 50 with housing 51, cap 52 and cap lock 53. When the cap lock 53 is disengaged, the cap 52 swings upward due to the urging of a cap spring. Feeder subconnector 60 (see FIGS. 8 and 9) is also provided, and is composed of housing 61 and outer case 62. Within the outer case 62 is arranged a lock arm 63 having an arm shaft 64 with an end portion 63a. The end portion 63a is urged downward by lock arm spring 65.

When receiving subconnector 50 and feeder subconnector 60 are connected together (see FIG. 9), the end portion 63a of the lock arm 63 moves along a tapered surface 51a of the housing 51 until it locks into a lock arm engaging groove 51b, which ensures the connection.

Disconnection of subconnectors 50 and 60 is achieved by pushing an operating portion 63b of the lock arm 63, which causes lock arm 63 to turn around the arm shaft 64, so that the end portion 63a upwardly moves so that it is no longer locked into lock arm engaging groove 51b.

However, as discussed on page 3 of the instant Application, the lock arm 63 or lock plate 57 may be damaged when force is applied in a direction to disconnect the subconnectors without first operating the operating portion 63b.

The Examiner takes the position that all of the features recited in claims 1-3 are disclosed by the ACA. Applicants note that, although the Examiner has explicitly indicated what portions of the ACA he believes correspond to such claimed features as the “subconnectors,” “cap,” and “cap lock,” he has not specified which portions of the ACA disclose the claimed “relief groove.”

In contrast, Applicants respectfully submit that the ACA fails to teach or suggest all of the features of rejected claims 1-3, as discussed below.

Claim 1

Applicants respectfully submit that the ACA fails to teach or suggest *at least* “a disengaging mechanism provided in at least one of said first and second subconnectors for disengaging said second subconnector from said first subconnector in a case that a predetermined force acts in a disengaging direction after completion of fitting said first subconnector into said second subconnector, whereby the failure of said connector is prevented,” as recited in claim 1.

Specifically, as discussed above, receiving subconnector 50 and feeder subconnector 60 of the ACA are connected together by end portion 63a of lock arm 63 being locked into a lock arm engaging groove 51b. This arrangement locks the subconnectors 50,60 to each other, but also may result in damage to the subconnectors when a predetermined force is applied in the direction to disconnect the subconnectors.

In contrast, the “disengaging mechanism” recited in claim 1 prevents this damage by “disengaging said second subconnector from said first subconnector in a case that a predetermined force acts in a disengaging direction.” Thus, generally, the disengaging mechanism operates when a predetermined force is applied to prevent damage to the subconnectors. No comparable structure is provided anywhere in the ACA.

Thus, Applicants respectfully submit that independent claim 1 is patentable over the applied reference. Further, Applicants respectfully submit that dependent claim 2 is allowable, *at least* by virtue of its dependency.

Claim 2

Additionally, Applicants respectfully submit that claim 2 is separately patentable over the ACA. Specifically, Applicants respectfully submit that the ACA fails to teach or suggest *at least* a “cap lock serving as a fitting lock for locking said second subconnector when said first subconnector and said second subconnector are fitted into each other after completion of fitting therebetween,” as recited in claim 2.

In contrast, the only portion of the ACA that could reasonably be read as approximating the claimed “cap lock” is cap lock 53. However, cap lock 53 does not serve “as a fitting lock for locking said second subconnector when said first subconnector and said second subconnector are

fitted into each other,” as recited in claim 2. Rather, such a locking function in the ACA is provided by the interaction of end portion 63a of arm shaft 64 and lock arm engaging groove 51b. There is simply no teaching or suggestion that cap lock 53 provides *any* locking function.

Additionally, Applicants respectfully submit that the ACA fails to teach or suggest *at least* that “said relief groove is formed in a support portion of said cap lock engaged with a cap lock shaft turnably supporting said cap lock.”

As an initial matter, the Examiner has not specifically identified any portion of the ACA that he feels teaches or suggests the recited “relief groove.” In any event, Applicants respectfully submit that there is no portion of the ACA that reasonably teaches or suggests such a “relief groove,” nor would one ever be needed as the cap lock 53 does not engage with or lock the feeder subconnector 60.

Thus, Applicants respectfully submit that dependent claim 2 is separately patentable over the applied reference, and respectfully request that the Examiner withdraw this rejection.

Claim 3

Applicants respectfully submit that the ACA fails to teach or suggest *at least* a “cap lock” both “preventing a turning of said cap when said subconnector is not fitted into said mate subconnector” *and* “serving as a fitting lock for locking said mate subconnector when said subconnector is fitted to said mate subconnector,” as recited in claim 3.

In contrast, as discussed above, the end portion 63a of arm shaft 64 serves as the fitting lock in the ACA. There is no teaching or suggestion that cap lock 53 serves “as a fitting lock for locking said mate subconnector when said subconnector is fitted to said mate subconnector.”

Further, Applicants respectfully submit that the ACA fails to teach or suggest *at least* “a relief groove provided in said support portion of said cap lock, and wherein said relief groove disengages said cap lock shaft from said support portion in a case that a predetermined force acts in a disengaging direction of said subconnector and said mate subconnector,” as recited in claim 3.

As discussed above, the Examiner has failed to specify what portion of the ACA he believes discloses the claimed “relief groove.” In any event, Applicants respectfully submit that there is no portion of the ACA that reasonably teaches or suggests such a “relief groove,” nor would one ever be needed as the cap lock 53 does not engage with or lock the feeder subconnector 60.

Thus, Applicants respectfully submit that independent claim 3 is patentable over the applied reference, and respectfully request that the Examiner withdraw this rejection.

New Claims

Claims 4-13 are hereby added.

Claim 4 corresponds to original claim 2 rewritten in independent form, and is fully supported *at least* by this claim. Claim 4 is respectfully submitted to be patentable over the applied reference for *at least* the reasons discussed above with respect to dependent claim 2.

Claims 5-13 are fully supported *at least* by FIGS. 1 and 2 of the instant Application. Claims 5-13 are respectfully submitted to be allowable *at least* by virtue of their dependency.


Conclusion

In view of the foregoing, it is respectfully submitted that claims 1-13 are allowable.
Thus, it is respectfully submitted that the application now is in condition for allowance with all of the claims 1-13.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Please charge any fees which may be required to maintain the pendency of this application, except for the Issue Fee, to our Deposit Account No. 19-4880.

Respectfully submitted,



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